

Propagating Common Droseras

by
Larry Mellichamp

The Sundews (*Drosera* species) are among the easiest of CP to propagate by seeds or vegetative means; in fact, some of them are downright prolific and may become weeds in your CP collection!

The easiest way to propagate many droseras is simply to leave them alone. The flowers of most species are self-compatible and self-pollinating, not even requiring insects or the "camel hair brush" to transfer pollen. In a few species, such as *D. rotundifolia*, *D. intermedia*, and *D. capillaris*, the flowers may not even open fully to expose the anthers (pollen producing organs) or stigmas (pollen receptive organs) but remain closed and self-pollinating, a condition termed *cleistogamy*. This may occur in nature during periods of dull, cloudy weather, as strong sunlight seems to be necessary to cause the flowers to open fully. If you want to ensure pollination, however, or to cross specific plants, then you can hand pollinate by gently rubbing two fully open flowers together using a circular motion to "spread the pollen around" and make sure that each stigma receives at least some pollen. You can also transfer pollen with a brush, but since the brush is difficult to clean, contamination by unwanted pollen is harder to avoid. Sundews such as *D. capensis* will set and disperse such abundant seed that young plants will come up in any available location, contaminating other pots with unwanted offspring. *D. capillaris* tends to behave as an annual, dying off and coming up from seed each year in various pots whether you want them or not.

In sexually propagating the droseras which do not go dormant, such as *D. capensis*, *D. burmanni*, *D. aliciae*, and *D. spatulata* the seeds can be started anytime as ripe (6-8 weeks after pollination) on the surface of finely milled

sphagnum moss kept quite moist. Avoid germinating seeds in tightly sealed containers as fungus will tend to grow rampant in the near 100% humidity. You may want to treat the seeds with a sprinkling (dry, or liquid suspension) of captan or benomyl fungicide to help prevent "damping off." As the seedlings get bigger, after several months to a year, transplant them into larger containers in a medium of 1 part ground, brown peat and 3-4 parts white quartz sand.

With the North American droseras which go dormant in winter, it is best to stratify the seeds to get uniform germination. To do this, sow the seeds as normal on moist, milled sphagnum, then place the containers in the refrigerator (or cool place at 40°F.) for 4-6 weeks. Remove, keep moist, warm (60-70°F), and shady, and germination should occur in 1-4 weeks. [See CPN Vol. 3, No. 2, page 19-21] Again, watch out for fungus and try to use clean, sterile materials and distilled water if available.

Some droseras, such as *D. binata*, *D. binata* var. *dichotoma*, and *D. binata* var. *multifida* may not readily set seed. These types are self-sterile, and must have a different individual from a different clone with which to cross pollinate. This is sometimes difficult to obtain since many of the specimens in cultivation are from one or a few original specimens that have been widely distributed among growers. Thus a clone is simply many individuals vegetatively propagated from a single individual.

However, *D. binata* and varieties, as well as most other droseras, can be propagated by vegetative means. One such technique is to use root cuttings. The large, thick, black roots of *D. binata* and varieties may be cut into 2-4" pieces and

potted 1-2" deep in the growing medium (peat & sand, peat — perlite or whole-fiber sphagnum) and they will readily send up new shoots. The brittle roots will soon fill the pot, and new divisions can be made.

The more typical method of propagating sundews vegetatively is by leaf cuttings. With the short-leaved types, such as the North American species *D. intermedia*, *D. rotundifolia*, *D. x anglica*, the whole leaf can be cut off at the base of the petiole near the stem, and the whole leaf can then be pressed onto the surface of moist, finely milled sphagnum and kept cool and shady. Be careful to keep the leaf flat against the sphagnum surface; it may require re-pressing regularly for the first few days. The long-leaved sundews, such as *D. filiformis* and *D. binata* may be done by cutting a mature leaf (the portion where the sticky glands are produced) into 1-2" segments with a sharp razor blade, and pressing the segments onto moist sphagnum as above. I have done this twice with *D. filiformis*

filiformis and both times it took exactly 6 weeks to the day for the first little buds to appear all along the margins of the leaf cuttings. The conditions were in the greenhouse, in the fall, part shade and 70°F. There is no need to use rooting hormone, although you can experiment to see if it speeds up the rooting time or produces more plantlets. After the plantlets produce new leaves 1-2" long, they may be separated and potted up as the parent leaf cutting should have rotted by then. Not every bud will grow to maturity, but you will still have plenty of new plants. Fungus infection may also be a problem here; try and keep a little air circulating in your propagation container.

Finally, the hybernacula (over-wintering buds) of the temperate sundews that form them may produce several buds as they grow older from year to year. These hybernacula may be carefully divided in the early spring before growth commences and repotted in the same or individual pots.

Review of Recent Literature

Adams, Richard M. II, 1978. *Cephalotus follicularis*: The Australian pitcher plant. *Am. Horticulturist* 57:4-5.

A brief but good descriptive article and with horticultural instructions. Two photos, one of which is unfortunately printed upside down.

Bamforth, S., Rhizosphere-soil microbial comparisons in sub-tropical forests of southeastern Louisiana. *Trans Am. Microsc. Soc.* 95(4):613-621 (1976). Bacteria, protozoa and fungi were studied from rhizospheres and nearby soils from *Sarracenia* sp. and 15 other plants.

Bradshaw, W., Lounibos, L. P., Evolution of dormancy and its photoperiodic control in pitcher-plant mosquitoes. *Evolution* 31(3):546-567 (1977).

The authors studied the two mosquito species, *Wyeomyia baynei* W. *smithii*, in *Sarracenia purpurea* over its entire range in the U.S. Despite the diapause in different stages of dormancy, the critical photoperiod mediating its onset and maintenance varies continuously, one hour for each increase of 5.4°N latitude or 769 meters of altitude. The ratio of these parameters, 142 meters per degree north permits calculation of an equivalent latitude for any locality. The direction of evolution of dormancy proceeded from south to north and has taken place via the progressive influence of photoperiod on the prediapause instar.

Cameron, C. J., Donald, G. L., and Paterson, C. G., Oxygen-fauna relationships